

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form an insulating film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a conductive film by vapor deposition on said insulating film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning on at least a portion of said pair of electrodes.

4. The method of claim 3 wherein said insulating film comprises a material selected from the group consisting of silicon nitride, SiO₂, phosphate glass, boronsilicate glass and aluminum nitride.

5. The method of claim 3 wherein said conductive film comprises a material selected from the group of consisting of aluminum, iron, nickel and cobalt.

6. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form an insulating film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a metal silicide film by vapor deposition on said insulating film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning on at least a portion of said pair of electrodes.

7. The method of claim 6 wherein said insulating film comprises a material selected from the group consisting of silicon nitride SiO_2 , phosphate glass, boron silicate glass, and aluminum nitride.

8. The method of claim 6 wherein said metal silicide film comprises a material selected from the group of consisting of SiM_x (where $0 < x < 4$ and M is such a metal as Mo, W, In, Cr, Sn or Ga).

9. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a semiconductor film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a conductive film by vapor deposition on said semiconductor film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning

10. The method of claim 9 wherein said conductive film comprises a material selected from the group consisting of aluminum, iron, nickel and cobalt.

11. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a semiconductor film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a metal silicide film by vapor deposition on said semiconductor film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning

12. The method of claim 11 wherein said metal silicide film comprises a material selected from the group of consisting of SiM_x (where $0 < x < 4$ and M is such a metal as Mo, W, In, Cr, Sn or Ga).

13. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a first insulating film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a second insulating film by vapor deposition on said first insulating film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to clean said first and second electrodes.

14. The method of claim 13 wherein said first and second insulating film are different type.

15. The method of claim 13 wherein said first and second insulating film are same type.

16. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged, substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a SiO₂ film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a phosphate glass film by vapor deposition on said SiO₂ film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through

on at least a portion of said pair of electrodes.

17. A vapor reaction method comprising the steps of:

preparing a pair of first and second electrodes within a reaction chamber, said pair of electrodes being arranged substantially in parallel with each other;

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a SiO₂ film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a boronsilicate glass film by vapor deposition on said SiO₂ film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning on at least a portion of said pair of electrodes.

chamber, said pair of electrodes being arranged substantially in parallel with each other:

placing a substrate in a reaction chamber on said first electrode so that a first surface of said substrate faces toward said second electrode;

introducing a first film forming gas into said reaction chamber through said second electrode;

exciting said first film forming gas in order to form a first conductive film by vapor deposition on said substrate placed in said reaction chamber;

introducing a second film forming gas into said reaction chamber through said second electrode;

exciting said second film forming gas in order to form a second conductive film by vapor deposition on said first conductive film in said reaction chamber;

removing said substrate from said reaction chamber after said vapor deposition;

introducing a cleaning gas into said reaction chamber through said second electrode;

exciting said cleaning gas in order to perform a plasma cleaning on at least a portion of said pair of electrodes.

19. The method of claims 3, 6, 9, 11, 13, 16, 17 or 18, wherein said cleaning gas is a fluoride.

20. The method of claims 3, 6, 9, 11, 13, 16, 17 or 18, wherein said